

-continued

(x i) SEQUENCE DESCRIPTION: SEQ ID NO: 274:

Met	Pro	Arg	Ser	Arg	Ala	Leu	Ile	Leu	Gly	Val	Leu	Ala	Leu	Thr	Thr
1				5					10					15	
Met	Leu	Ser	Leu	Cys	Gly	Gly									
			20												

What is claimed is:

1. A method of eliciting a T cell-mediated immune response in a mammal, which method comprises

introducing into the mammal a nucleic acid containing an expression control sequence operably linked to a DNA sequence encoding a polypeptide, the polypeptide consisting of an immunogenic peptide linked by a peptide bond to a trafficking sequence that directs the immunogenic peptide into the endoplasmic reticulum or an endosomal compartment of a cell, wherein said immunogenic peptide consists of an amino acid sequence which binds to an MHC class I molecule of an APC of the mammal, and wherein the expression control sequence causes expression of the sequence encoding the polypeptide; and

expressing the nucleic acid within a cell of the mammal such that the immunogenic peptide is presented by the MHC class I molecule to a T cell of the mammal, thereby eliciting a T cell-mediated immune response in the mammal.

2. The method of claim 1, wherein the immunogenic peptide is a fragment of a protein naturally produced by an infective agent.

3. The method of claim 2, wherein the infective agent is a virus.

4. The method of claim 2, wherein the infective agent is HIV, hepatitis B virus, measles virus, rubella virus, influenza virus, rabies virus, *Corynebacterium diphtheriae*, *Bordetella pertussis*, *Plasmodium spp.*, *Schistosoma spp.*, *Leishmania spp.*, *Trypanosoma spp.*, or *Mycobacterium lepre*.

5. The method of claim 1, wherein the immunogenic peptide is at least 8 residues in length.

6. The method of claim 1, wherein the immunogenic peptide is 10 to 30 residues in length.

7. The method of claim 1, wherein the nucleic acid is administered to the mammal in a liposome.

8. The method of claim 1, wherein the nucleic acid is administered to the mammal in an ISCOM.

9. The method of claim 1, wherein the immunogenic peptide has the amino acid sequence of a protein segment which is naturally processed and presented by a human APC.

10. The method of claim 1, wherein the mammal is a human.

11. The method of claim 1, wherein the nucleic acid is a plasmid.

12. The method of claim 1, wherein the nucleic acid comprises a viral vector.

13. The method of claim 1, wherein the trafficking sequence is SEQ ID NO: 155.

14. The method of claim 1, wherein the trafficking sequence is a portion of SEQ ID NO: 155 that causes trafficking of the polypeptide to the endoplasmic reticulum.

15. The method of claim 1, wherein the nucleic acid is provided in combination with a transfection agent.

16. A method of activating a T cell in a mammal such that the T cell will recognize an immunogenic peptide expressed on the surface of a cell, which method comprises

introducing into the mammal a nucleic acid containing an expression control sequence operably linked to a sequence encoding a polypeptide consisting of an immunogenic peptide linked by a peptide bond to a trafficking sequence that directs the immunogenic peptide into the endoplasmic reticulum or an endosomal compartment of a cell, wherein said immunogenic peptide consists of an amino acid sequence which binds to an MHC class II molecule of an APC of the mammal, and wherein the expression control sequence causes expression of the sequence encoding the polypeptide; and

expressing the nucleic acid within a cell of the mammal such that the immunogenic peptide is presented by the MHC class II molecule to a T cell of the mammal, thereby activating said T cell.

17. The method of claim 16, wherein the nucleic acid is a plasmid.

18. The method of claim 16, wherein the nucleic acid comprises a viral vector.

19. The method of claim 16, wherein the immunogenic peptide is 10 to 30 residues in length.

20. The method of claim 16, wherein the nucleic acid is administered to the mammal in a liposome.

21. The method of claim 16, wherein the immunogenic peptide is a fragment of a protein naturally produced by an infective agent.

22. The method of claim 16, wherein the amino acid sequence of the immunogenic peptide is the amino acid sequence of a protein segment which is naturally processed and presented by a human APC.

23. The method of claim 16, wherein the mammal is a human.

24. The method of claim 16, wherein the trafficking sequence is SEQ ID NO: 155.

25. The method of claim 16, wherein the trafficking sequence is a portion of SEQ ID NO: 155 that causes trafficking of the polypeptide to the endoplasmic reticulum.

26. The method of claim 16, wherein the nucleic acid is provided in combination with a transfection agent.

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